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10/722,579

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Mitchell Clark Voges

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BAKER & MCKENZIE LLP  
PATENT DEPARTMENT  
2001 ROSS AVENUE  
SUITE 2300  
DALLAS, TX 75201

EXAMINER

BLAU, STEPHEN LUTHER

ART UNIT

PAPER NUMBER

3711

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/722,579

Applicant(s)

VOGES ET AL.

Examiner

Stephen L. Blau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 26-58 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 and 26-58 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/21/06.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 27-32 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is improper antecedent basis for the term "the shaft module" in that this element had not previously been disclosed.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6-7, 45, and 48-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush.

Anderson discloses determining swing information related to a golfer's swing technique in the form of sensors used during the swing [0042], receiving swing data over a wireless communication link in the form of digital camera collecting data [0026]

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[0030], combining information and data [0042], using received data and determined information to derive swing parameters for use in fitting a golfer with equipment [0002], optimizing launch angle in the form of this being a method of fitting a club to a golfer and launch angle is measured (Implied) [0042], using pattern and markings on a ball to track features [0036], displaying swing data in a graphical format [0032], generating a baseline performance matrix [0031], [0034], selecting an optimal shaft for a golfer [0050], selecting an optimal head for a golfer in the form of loft and lie [0051], and selecting equipment to improve performance ([0003], abstract).

Anderson lacks using data and information to optimize launch angle, velocity, and spin rate to achieve maximum distance and control, a baseline performance matrix able to be used to determine if a golfer's swing needs modification, a step of identifying swing flaws related to the golfer's swing technique and correcting swing and a step of selecting an optimal ball for a golfer.

Gobush discloses a method of receiving launch information in the form of launch angle, velocity and spin rate (Col. 2, Lns. 17-26) using a camera and markings (Col. 1, Lns. 40-52, Fig. 5B), checking for gaps between clubs in order to fit golf equipment to a golfer in order to optimize equipment for a golfer (Col. 18, Lns. 19-33, Col. 19, Lns. 1-50), a baseline performance matrix able to be used to determine if a golfer's swing needs modification in order to maximize distance (Col. 9, Lns. 1-6), varying launch conditions by the system (spin rate, speed, launch angle) to evaluate the results (Col. 8, Lns. 55-62), providing swing instruction when it is determined that the golfer's swing technique needs modification (Col. 18, Lns. 55-58), a step of testing different golf ball

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types (Col. 18, Lns. 59-67), predicting landing point and accuracy based on ball velocity, ball direction and ball spin immediate post-launch and performance concerns of carry distance and accuracy (Col. 1, Lns. 13-23). Gobush does not specifically disclose maximizing control (accuracy) as Gobush disclosed maximizing distance but clearly one skilled in the art of fitting a club to a player by modifying features of launch angle, velocity and spin rate would have selected a suitable accuracy performance in which maximizing accuracy is included.

In view of Gobush it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the step of using data and information to optimize launch angle, velocity and spin rate to achieve maximum distance and control in order to optimize these characteristics when playing a round of golf for a specific golfer with a specific swing and in order to minimize the number of strokes it takes a specific golfer to play a hole due to being able to take the shortest path to a hole and be able to hit as far as possible to a hole each time the golfer hits a ball. In view of Gobush it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the step of generating a baseline performance matrix able to be used to determine if a golfer's swing needs modification in order to maximize distance and or accuracy. In view of Gobush it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the a step of identifying swing flaws related to the golfer's swing technique and correcting swing flaws in order to have meaningful swing data to select equipment from and in order to help the golfer play better. In view of Gobush it would have been obvious to modify the method of fitting a

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golfer with equipment of Anderson with a step of selecting an optimal ball for a golfer in order to have both an optimum club and ball for a golfer with a specific swing.

4. Claims 2-5, 8, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush as applied to claims 1, 6-7, 45, and 48-52 above, and further in view of Hammond and Naruo.

Anderson discloses receiving swing data in the form of strain gauges [0042], and determining swing information related to a golfer's swing technique comprising a video taping of the swing [0026], [0032].

Anderson lacks deriving a load time, a load pattern, a ramp potential and peak deflection from strain gauges for received data over a wireless link.

Hammond discloses a method and a system comprising receiving swing data over a wireless communications link (Fig. 1), using swing data to derive swing parameters (Col. 2, Lns. 43-47) a strain gauge sensing shaft deflection coupled to a transmitter (Col. 2, Lns. 50-55), a display (Ref. No. 44), measuring flex and bending of a shaft during a swing (Col. 2, Lns. 29-34) and a method of using this swing data to fit a golfer with golf equipment (Col. 4, Lns. 6-10). In view of the patent of Hammond it would have been obvious to have the received data over a wireless link being for a strain gage on a shaft in order to measure flexing and bending of a shaft in selecting a shaft for a golfer and in order to not have any wires coming from a club as a golfer swings the club.

Naruo discloses strain data displayed showing a load time, a load pattern, a ramp potential and peak deflection (Fig. 25), using strain gauges on a shaft in order to detect deflection during a swing (Col. 3, Lns. 7-11), swing information being related to a golfer's swing technique (swing time), a video taping a golfer's swing (Col. 2, Lns. 28-41), and based on the swing parameters select an optimum flex for a shaft based on the deflection (Col. 2, Lns. 28-41, Col. 3, Lns. 4-6). In view of the patent of Naruo it would have been obvious to modify the method of fitting a club to a player of Anderson to include deriving data from a strain gage of load time, a load pattern, a ramp potential and peak deflection in order to provide an optimum flex for a shaft to a golfer based on deflection of a shaft.

5. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush as applied to claims 1, 6-7, 45, and 48-52 above, and further in view of Nauck.

Anderson lacks swing information being related to what equipment a golfer uses.

Nauck discloses custom fitting clubs to golfer through evaluating the result of combined equipment and golfer's characteristics in a dynamic evaluation (Col. 4, Lns. 51-55) in order to prevent equipment from having little positive effect for a golfer (Col. 4, Lns. 30-51). In view of the patent of Nauck it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the step of swing information being related to what equipment a golfer uses in order to ensure the current equipment

will having a positive effect for a golfer and in order to have a base line to start from in fitting a club to a golfer.

6. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush as applied to claims 1, 6-7, 45, and 48-52 above, and further in view of Sayers.

Anderson lacks determining swing information related to a golfer's current swing, combining swing information with swing data to derive swing parameters for use in fitting a golfer with equipment, and swing information being related to a golfer's strengths, and weaknesses.

Sayers discloses custom fitting clubs to golfer by fitting a player with a personal timing, coordination and physical strength to his equipment in order to optimize a player's game (Col. 1, 18-26). In view of the patent of Sayers it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the steps of determining swing information related to a golfer's current swing, combining swing information with swing data to derive swing parameters for use in fitting a golfer with equipment, and swing information being related to a golfer's strengths, and weaknesses in order to optimize a player's game.

7. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush as applied to claims 1, 6-7, 45, and 48-52 above, and further in view of Antonious (5,916,041).



Anderson lacks determining swing information related to a golfer's current swing, combining swing information with swing data to derive swing parameters for use in fitting a golfer with equipment, and swing information being related to the courses and conditions the golfer normally encounters. Antonious discloses the selection of golf equipment in the form of the type of head being dependent on conditions encountered on a golf course in order to optimize energy transfer from a head to a ball (Col. 6, Lns. 19-27). In view of Antonious it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the steps of determining swing information related to a golfer's current swing, combining swing information with swing data to derive swing parameters for use in fitting a golfer with equipment, and swing information being related to the courses and conditions the golfer normally encounters in order to have equipment including heads which optimize energy transfer from a head to a ball for courses and conditions a player plays in.

8. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush as applied to claims 1, 6-7, 45, and 48-52 above, and further in view of Mann.

Hammond lacks determining swing information related to a golfer's current swing, combining swing information with swing data to derive swing parameters for use in fitting a golfer with equipment, and swing information being related to the level of competition encountered.

Mann discloses custom fitting clubs to golfer based on the level of competition encountered in the form of professionals should have heavy shafts (Col. 5, Lns. 18-20). In view of the patent of Mann it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the steps of determining swing information related to a golfer's current swing, combining swing information with swing data to derive swing parameters for use in fitting a golfer with equipment, and swing information being related to the level of competition encountered in order to be able hit as far as the competition.

9. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush as applied to claims 1, 6-7, 45, and 48-52 above, and further in view of Cervantes.

Anderson lacks a step of identifying swing flaws related to the golfer's swing technique and correcting swing flaws prior to evaluating a golfer's current clubs or receiving swing data.

Gobush discloses swing instruction to correct swing flaws during a method of fitting of a club to a golfer (Col. 18, Lns. 55-57). Cervantes discloses a method of evaluating a specific golfer's swing performance and adjusting to correct swing flaws (Col. 1, Lns. 27-34). Clearly an artisan skilled in the art in fitting a club to a golfer using cameras and sensors is going to provide feedback to a golfer's swing to optimize the time of the fitting session by providing an input at suitable time in which prior to the evaluating the golfer's current clubs or receiving swing data are included. In view of the

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patents of Gobush and Cervantes it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the step of identifying swing flaws related to the golfer's swing technique and correcting swing flaws prior to evaluating a golfer's current clubs or receiving swing data in order to have meaningful swing data when a golfer is swinging a club during a fitting process. Some beginner golfers are not going to have a swing worth testing without a minimal amount of swing instruction prior to the testing and evaluation steps to fit a beginner golfer with a set of clubs.

10. Claims 26-32, 35, 37-38, 40 and 53-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush, Hammond, Naruo and Karasavas.

Anderson discloses a processor [0025], optimizes a club for specific values for a set of swing characteristics [0034], a high speed camera (Claim 6), color markings on club (Claim 4), markings on a ball [0036] and a prior art camera being a color camera [0007]. Anderson does not specifically disclose that the camera is a color camera but clearly an artisan using color markers on a club would have selected a camera which would pick up the color markers in which a color camera is included.

Anderson lacks launch information based on color markings on a ball, the color markings comprises at least two colors, a color camera, a processor optimizing launch angle, spin rate and velocity of a ball, a shaft module, a strain gage and wireless transmitter comprises a single device, a plurality of strain gages each coupled to a

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plurality of wireless transmitters, and information being back spin, side spin and rifle speed as it is launched.

Gobush discloses using color markers on a ball to obtain launch information (Col. 19, Lns. 37-50, Fig. 10), different color markers between a club and a ball in order to differentiate the different markers (Col. 19, Lns. 37-50), a processor presenting ideal launch conditions for a player's specific capabilities (Col. 9, Lns. 1-6), receiving launch information in the form of launch angle, velocity, spin rate (Col. 2, Lns. 17-26), back spin, and side spin of a ball as it is launched and checking for gaps between clubs in order to optimize equipment for a golfer (Col. 18, Lns. 19-33, Col. 19, Lns. 1-50).

Gobush does not specifically disclose receiving rifle spin but collecting back spin and side spin together is rifle spin. Karasavas discloses the color markings comprise at least two colors in order to provide diagnosis of faults during a swing (Col. 1 Ln. 63 through Col. 2, Lns. 4). In view of the patents of Gobush and Karasavas it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the step of obtaining launch information based on color markings on a ball and the color markings comprises at least two colors in order to make it easier for a camera and processor to identify how the ball is spinning after impact by having markers on a ball which are easier to differentiate between. In view of the patent of Gobush and it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with the step of a processor optimizing launch angle, spin rate and velocity of a ball in order to provide ideal launch conditions for the player's specific capabilities. In view of Gobush it would have been obvious to modify the system for fitting a golfer with

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equipment of Anderson with a system to collect launch speed, launch angle, spin rate, back spin, side spin, and rifle spin of a ball as it is launched in order to optimize a ball and a head for a golfer so that the entire club (i.e. shaft, head) and ball are optimized for playing a round of golf.

Hammond discloses a processor having a shaft module (Fig. 1) transmitters secured to a shaft (Fig. 1) and a plurality of wireless transmitters each coupled with to one of a plurality of strain gauges and each transmitter transmitting different frequencies (Col. 2, Lns. 50-60). In view of the patent of Hammond it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with a processor having a shaft module in order to evaluate information from sensors attached to a shaft in determining the best shaft for a golfer. In view of the patents of Hammond it would have been obvious to modify the method of fitting a golfer with equipment of Anderson with a strain gage and wireless transmitter comprises a single device, and a plurality of strain gages each coupled to a plurality of wireless transmitters in order to utilize a known way in the art of collecting and transmitting data from strain sensors attached on a shaft used in fitting equipment to golfers.

It would have been obvious to modify the method of fitting of Anderson to have a camera being a color camera in order to best pick up the colored markers on a club in evaluating swing characteristics.

See paragraphs above for elements of structure previously rejected by Anderson in view of Gobush, Hammond, and Naruo.

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11. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush, Hammond, Naruo and Karasavas as applied to claim 26-32, 35, 37-38, 40 and 53-58 above, and further in view of Kawaguchi.

Anderson lacks strain gauges configured to sense the lead or lag deflection of a shaft, and tow up or down deflections for a shaft.

Kawaguchi discloses strain gauges configured to sense the lead or lag deflection (Fig. 3) and tow up or down deflections for a shaft (Fig. 4) in order to provide a shaft most suited for a golfer (Col. 1, Lns. 35-46). In view of the patent of Kawaguchi it would have been obvious to modify the method and fitting system of Anderson to have strain gauges configured to sense the lead or lag deflection and tow up or down deflections for a shaft in order to provide a shaft most suited for a golfer.

12. Claims 36 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Gobush, Hammond, Naruo and Karasavas as applied to claim 26-32, 35, 37-38, 40 and 53-58 above, and further in view of Evans.

Anderson lacks a strap configured to secure a wireless transmitter and one transmitter. Evans discloses a strap used to secure a transmitter attached to a wrist (Fig. 1) and one transmitter (Abstract). In view of the patent of Evans it would have been obvious to modify the club of Anderson to have transmitters secured to a shaft by straps in order to use a securing mechanism used in the art for transmitters. In view of the patent of Evans it would have been obvious to modify the club of Anderson to have

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one transmitter in order to minimize the number of components needed for the swing data collection system.

### ***Response to Arguments***

13. The argument that Gobush is improper due to Gobush not teaching optimizing launch angle, velocity and spin rate to maximize distance is disagreed with. In column 8 lines 59-62 it states that it is possible to determine what effect a variation in any of the launch conditions (golf speed, spin rate, and launch angle) would have on the results. In column 9 lines 1-6 and column 1 lines 13-23 clearly one of the results of concern is maximizing distance. It would be obvious to vary golf speed, spin rate and launch angle in order to maximize the distance. The argument that Gobush is improper due to Gobush teaching collecting data for ten different items is disagreed with. Gobush also discloses looking at only three as discussed above. The argument that it is improper to Gobush since Gobush does not disclose at least two color markings on a ball to obtain launch information is disagreed with. Gobush was not used to show this but Karasavas was. Karasavas clearly shows at least two color markings on a ball. Gobush was used to show it is known to place different colors in the same picture of moving objects to differentiate between the moving objects. Clearly that is similar to what Karasavas is doing on a ball. Both Gobush and Karasavas disclose the value of using different colored markings in a picture of moving objects or object to better assist in clearly evaluating the movement. The argument that even if multiple color markings were used

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on the golf ball of the Gobush system the system does not process multiple colors on the ball since color markings are only used to differentiate between the ball and the club is disagreed with. If the system is able to differentiate between a ball and a club than clearly it is able to differentiate multiple color markings if they were used on a ball.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen L. Blau whose telephone number is (571) 272-4406. The examiner can normally be reached on Mon - Fri 10:00 AM - 6:30 PM.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene Kim can be reached on (571) 272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Slb/ 30 June 2006

  
**STEPHEN BLAU**  
**PRIMARY EXAMINER**